AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A surface analysis device ~~for identifying molecules by simultaneously scanning nanocodes on a surface of a substrate~~, comprising:

a substrate having a pattern on a surface of the substrate to orient a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;

a scanning array comprising a plurality of microscopy tips configured to simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate; and

an analyzer coupled with the scanning array configured to receive simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information to identify ~~molecules~~ at least a portion of a sample molecule associated with the nanocodes and removed from the substrate prior to the simultaneous scan of the plurality of the tag elements, wherein the sample molecule is different from the plurality of the nanocodes.

2. (Original) The device of claim 1, wherein simultaneously scanning includes measuring the friction characteristics of the substrate and the nanocodes.

3. (Original) The device of claim 2, wherein the scanning array includes two or more atomic force microscopy (AFM) tips.

4. (Original) The device of claim 3, wherein the scanning array is a 3x3 array of AFM tips.

5-11 (Canceled)

12. (Original) The device of claim 1, wherein the molecules include DNA molecules.

13. (Original) The device of claim 1, further comprising a substrate holder.

14. (Original) The device of claim 1, wherein the nanocodes include molecular assay labels.

15. (Currently amended) A surface analysis device ~~for identifying molecules by simultaneously scanning nanocodes on a surface of a substrate~~, comprising:

a substrate holder having a pattern on a surface of the substrate holder to orient a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;

a scanning array comprising a plurality of microscopy tips proximate the substrate holder configured to move in relation to the substrate holder and simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate holder; and

an analyzer coupled with the scanning array configured to simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information to identify ~~molecules~~ at least a portion of a sample molecule associated with the nanocodes and removed from the substrate prior to the simultaneous scan of the plurality of the tag elements, wherein the sample molecule is different from the plurality of the nanocodes.

16-19 (Canceled)

20. (Currently amended) A method of simultaneously scanning nanocodes on a surface of a substrate, comprising:

providing nanocodes on ~~a~~ the surface of the substrate ~~with nanocodes thereon;~~, each

nanocode comprising a tag element and a reactive molecule; and

simultaneously scanning the plurality of tag elements of the plurality of the nanocodes using a surface analysis device having a scanning array;

wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

21. (Canceled)

22. (Original) The method of claim 20, wherein simultaneously scanning includes measuring the friction characteristics of the substrate and the nanocodes.

23. (Original) The method of claim 22, wherein the scanning array includes two or more atomic force microscopy (AFM) tips.

24. (Original) The method of claim 23, wherein the scanning array is a 3x3 array of AFM tips.

25-30 (Canceled)

31. (Currently amended) The ~~method~~ surface analysis device of claim ~~20~~1, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

32. (Currently amended) The ~~method~~ surface analysis device of claim ~~20~~15, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic

elements.

33. (Currently amended) A method of accelerated scanning of nanocodes on a surface of a substrate ~~to identify molecules associated with the nanocodes~~ of a surface analysis device, comprising:

orienting a sample molecule and associated nanocodes on the surface of the substrate, the sample molecule being different from the plurality of the nanocodes and each nanocode comprising a tag element and a reactive molecule, to preserve orientation of a plurality of tag elements of the nanocodes;

removing at least the sample molecule from the surface of the substrate;

subsequently simultaneously scanning the plurality of tag elements of the plurality of the nanocodes using a scanning array having two or more microscopy tips;

receiving the simultaneously scanned information from the scanning array with an analyzer; and

identifying ~~the molecules~~ at least a portion the sample molecule associated with the nanocodes.

34. (Original) The method of claim 33, wherein the microscopy tips are scanning tunneling microscopy (STM) tips.

35. (Original) The method of claim 33, wherein the microscopy tips are atomic force microscopy (AFM) tips.

36. (Original) The method of claim 33, wherein the microscopy tips are a combination of atomic force microscopy (AFM) and scanning tunneling microscopy (STM) tips.

37. (Original) The method of claim 33, wherein simultaneously scanning includes parallel scanning by the scanning array.

38. (New) A surface analysis device, comprising:

a substrate having a surface for placing a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;

a scanning array comprising a plurality of microscopy tips configured to simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate; and

an analyzer coupled with the scanning array configured to receive simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information to identify at least a portion of a sample molecule associated with the nanocodes, wherein the microscopy tips comprises scanning tunneling microscopy (STM) tips.

39. (New) The surface analysis device of claim 38, wherein the microscopy tips are a combination of atomic force microscopy (AFM) and scanning tunneling microscopy (STM) tips.

40. (New) A surface analysis device, comprising:

a substrate holder configured to orient a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule; a scanning array comprising a plurality of microscopy tips proximate the substrate holder configured to move in relation to the substrate holder and simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate holder; and an analyzer coupled with the scanning array configured to simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information

to identify at least a portion of a sample molecule associated with the nanocodes, wherein the microscopy tips comprises scanning tunneling microscopy (STM) tips.

41. (New) The surface analysis device of claim 40, wherein the microscopy tips are a combination of atomic force microscopy (AFM) and scanning tunneling microscopy (STM) tips.

42. (New) The method of claim 20, wherein the microscopy tips comprises scanning tunneling microscopy (STM) tips.

43. (New) The method of claim 42, wherein the microscopy tips are a combination of atomic force microscopy (AFM) and scanning tunneling microscopy (STM) tips.

44. (New) The method of claim 33, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.